streamcore

22a Release notes

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1 Software suite 22a

The Streamcore software suite is a set of software releases for StreamGroomers and the SGM. This document contains the release notes for the Streamcore 22a software suite.

The software suite must be installed on the SGM with the SGMConf application.

The OPE and BOOT elements must be deployed on the StreamGroomers from the SGM with the StreamView application. **Since version 6.3, when an OPE is installed on a StreamGroomer, the SGM automatically deploys the latest versions of the BOOT and ACC modules. The BOOT version will only be active after the StreamGroomer has been restarted (see "Restarting the StreamGroomer"). 2.3 Activation d'une version Boot, ACC et OPE below)**

This software suite contains the following SGM and StreamGroomers software versions:

```
Software suite: 22a
Official OPE: 6-4.25
Official OPE: 6-5.14
Official ACC M4G64 : ACC26
Official ACC M5G : ACC30
Official M4G64 boot: S55
Official M5G boot: T09
```

1.1 SOFTWARE SUITE NUMBERING EVOLUTION

To simplify the tracking of releases, the numbering of releases is changing:

The software suite number is now composed of two parts:

- 2 digits for the year of release (22 for example)
- 1 letter for the release sequence in the year (a for the first release of the year)

The software suites are currently scheduled for 3 releases per year.

The other elements of the software suite keep their own numbering

OPE 6-5.12 or OPE 6-4.25 for example

This approach is intended to simplify the understanding of the serial numbers of the different modules:

- Avoiding confusion between the serial numbers of software suites and OPEs or other modules
- By facilitating the coexistence of several different versions in a fleet of probes (OPE, 6-4, 6-5 and soon 6-6 for example)
- By allowing a quick reading of the "age" of the version
- By simplifying the memorization of the version number

1.2 SOFTWARE SUITE 22A.1

A corrective version **22a.1** of the 22a suite is available.

This suite adds the possibility to migrate SGs in SSH communication mode. We therefore recommend to install this version 22a.1 before launching a SG migration operation.

The 22a.1 suite embeds the same OPEs and BOOTs as the 22a.

2 IMPORTANT RECOMMENDATIONS

Before deploying this version of the software, please read the following recommendations carefully and contact Streamcore support if you have any questions.

2.1 LICENSES

As of version 6-5.T06, the Streamcore software suite installs a new license management system that requires an update of the license currently in use on the SGM.

If you have already used an SGM in 6-5.T06, you do not need to update the license.

2.2 NEW PASSWORD

Starting with version 6-5.T06, the default passwords for ***sgm*** and ***sc*** users are set to different values.

Please contact Streamcore support at support@streamcore.com to receive these new passwords.

2.3 ACTIVATION OF A BOOT, ACC AND OPE VERSION

The activation of a new version of the OPE/ACC requires a restart of the StreamGroomer. During the restart phase, the StreamGroomer is inaccessible. Restarting the StreamGroomer automatically stops the following functions at the corresponding sites:

- Monitoring: No measurements (polling) are made during the restart and probably no statistics will be available for the corresponding 1 minute or 10 minute period in the real-time and long-term graphs and reports. The groomings stop working and their status is set to *DOWN*, unless the grooming has been configured to be temporarily managed as a shaping.
- QoS and marking: Traffic will not be prioritized or marked until the StreamGroomer has reloaded and activated its configuration.
- Load balancing: Load balancing is disabled on the site supported by the StreamGroomer.
- WAN optimization: Accelerated TCP sessions will be interrupted.
- Netflow and monitoring: The StreamGroomers will stop sending Netflow tickets and traps/informs until it has reloaded and applied its configuration.

It is strongly recommended to plan and schedule appliance restarts to minimize the impact on network flows and end-user activities.

It is recommended to activate the same versions of Boot, OPE and ACC on the StreamGroomers of a dual and tandem configuration.

If WAN optimization, Grooming, QoS and Tagging or Load Balancing features are used, it is strongly recommended to run the same versions of Boot, OPE and ACC software on both ends of a grooming or peering to avoid errors caused by inconsistency between StreamGroomers.

2.4 SOFTWARE VERSIONS FOR M3G NOT AVAILABLE

The boot and OPE packages for M3G appliances are removed from the Streamcore 6-4.12 software suite, as M3G appliances are in EOL.
OPE version 6.1 is also removed from the Streamcore software suite, as this version is also in EOL.

2.5 ACC25 UPDATE

- The content of the existing cache can be deleted from the StreamGroomer each time the ACC25 is launched on the SG (see Known problems).
- The ACC25 can work with other SGs in ACC25 or ACC24 only (for future versions, please see the corresponding release note).

2.6 UPGRADE BOOT M4G64 S49 OR LATER

A critical issue has been identified with boot versions up to S42 on SG360e, SG860e, SG1660e and SG3260e that impacts communication with StreamGroomers and many other operations such as configuration, measurement and statistics collection, WAN optimization.
If the operating time of these StreamGroomers is longer than 200 days, the device may become inaccessible after a software reboot (e.g. when activating an OPE version). The workaround is a hardware reboot (unplug and plug in the power supply). To solve this problem, deploy the Boot S49 on these appliances and apply the new version as soon as possible by restarting the StreamGroomer.
Streamcore strongly recommends that all StreamGroomers be upgraded to an S49 or later boot version as soon as possible.

3 End of support for software suites

Please note the end of support dates for Streamcore software suites and operational software releases (OPEs):

You can refer to the End of Life (EOL) Policy document for a comprehensive view of the end of life (EOL) dates for Streamcore equipment and software.

Software suites	End of the assistance
6-4	December 31, 2023
6-5	Not planned

OPE	End of the assistance
6.2 high performance	30/06/2023
6.3	**End of support since 1s 01/04/2019**
6.4	31/12/2024
6.5	Not planned

- It is strongly recommended that the SGM, StreamGroomers, and StreamCollectors be updated to the latest versions of the Streamcore software suite, OPE, and Boot.

Please feel free to contact the Streamcore support team (support@streamcore.com) or your sales representative for more details on the upgrade path.

4 Improvements and new features

With this new version, Streamcore brings new useful features to its SGM and SG.

4.1 SGM 22A

4.1.1 SG migration from M4G to M5G

This version of StreamView allows online updating of a SG in the new M5G architecture.

Not all SG types are eligible for migration, the list of eligible types :

Types of SGs eligible for migration to M5G
SG2412
SG3412
SG360e
SG4412
SG860e
SG1660e
SG3270e

The technical specifications of the equipment (processors in particular) prevent the portability of the M5G base on older machines (SGX00e, SGx50e, SG3260e series).

4.1.1.1 PRELIMINARY PRECAUTIONS

The new software suite allows remote control of the installation of the M5G base and associated OPEs without the need for physical intervention on site or the presence of an operator.

Nevertheless, it is necessary to plan during the upgrade process to put the probes in bypass and activate them after the migration.

On the other hand, in M5G, the connection between the SGM and the probe must be in encrypted mode. RSH mode is no longer available. The probe and network elements (firewall, port opening) must therefore be configured beforehand.

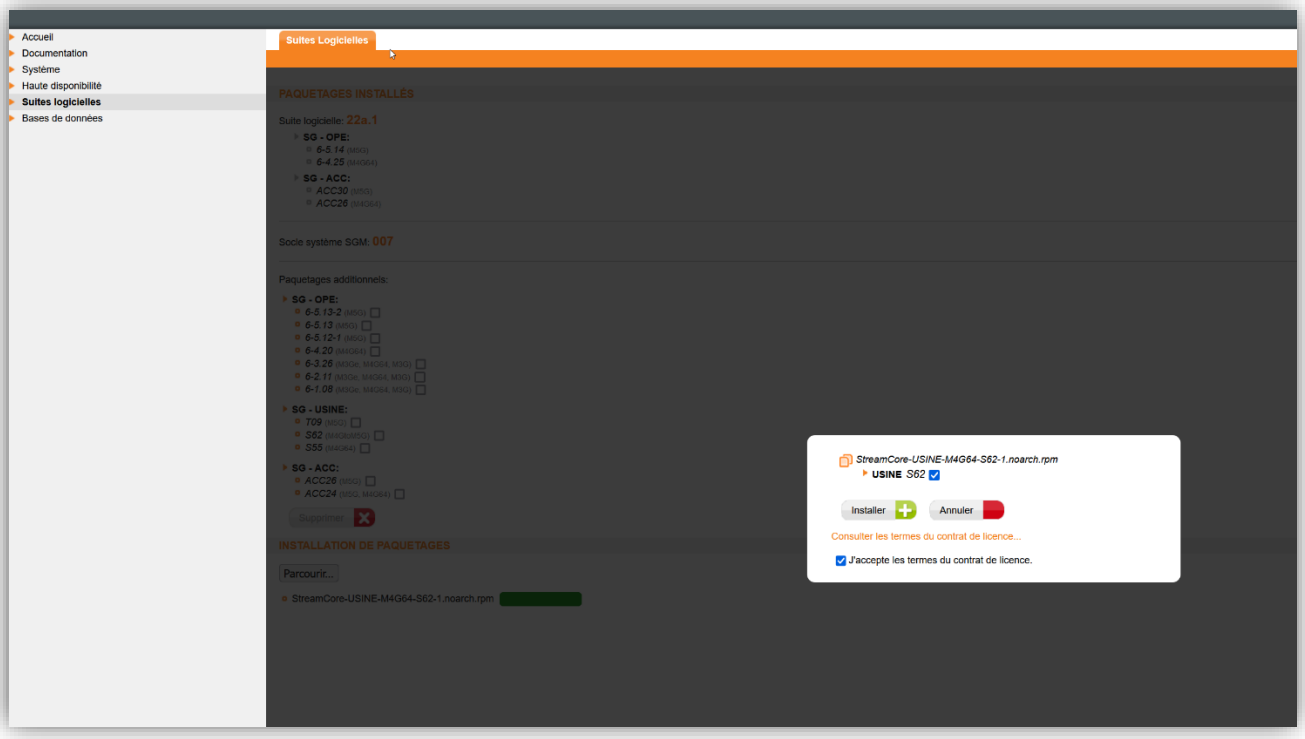
4.1.1.2 UPDATE

To migrate a SG you need to install the **S62** version of the boot.

This version can be installed on a S37 or more recent boot. It is nevertheless advised to install a recent boot (type S55) before installing the migration boot.

It is directly the installation operation that will automatically launch the update of the SG in M5G.

The S62 version, due to its size, is not included in the Software Suite but can be requested from Support or downloaded from the Extranet. It must therefore be installed in addition in the SGMConf.

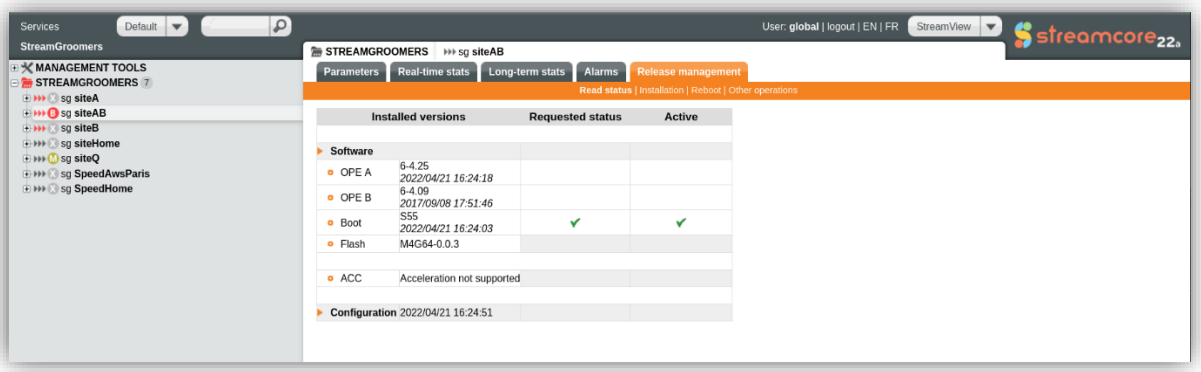


And to do this, ask for the installation file at support@streamcore.com

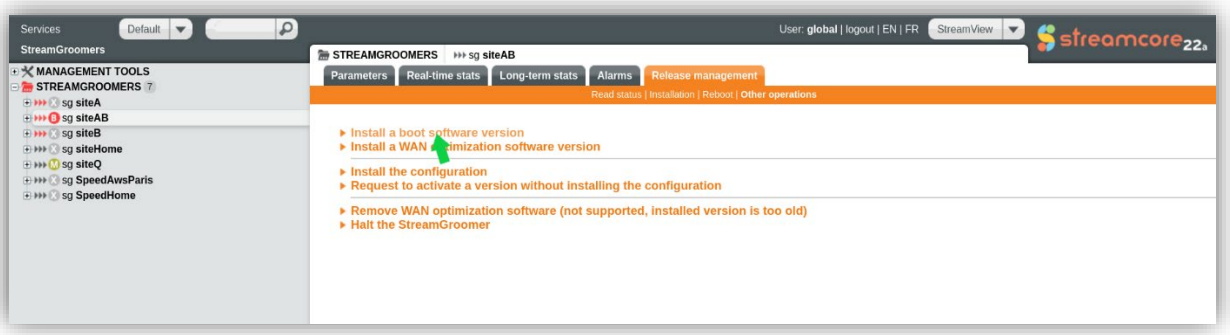
4.1.1.3 START THE MIGRATION

On a SG M4G and in Boot mode (Sxx version) :

If the SG is not in boot mode, you must put it in this mode. Be careful, going into boot mode causes a disconnection of the ports and a micro outage of service. This operation must be performed at a time that is not critical for network traffic. The advantage of switching to boot mode is that the various migration steps will not affect the site traffic.

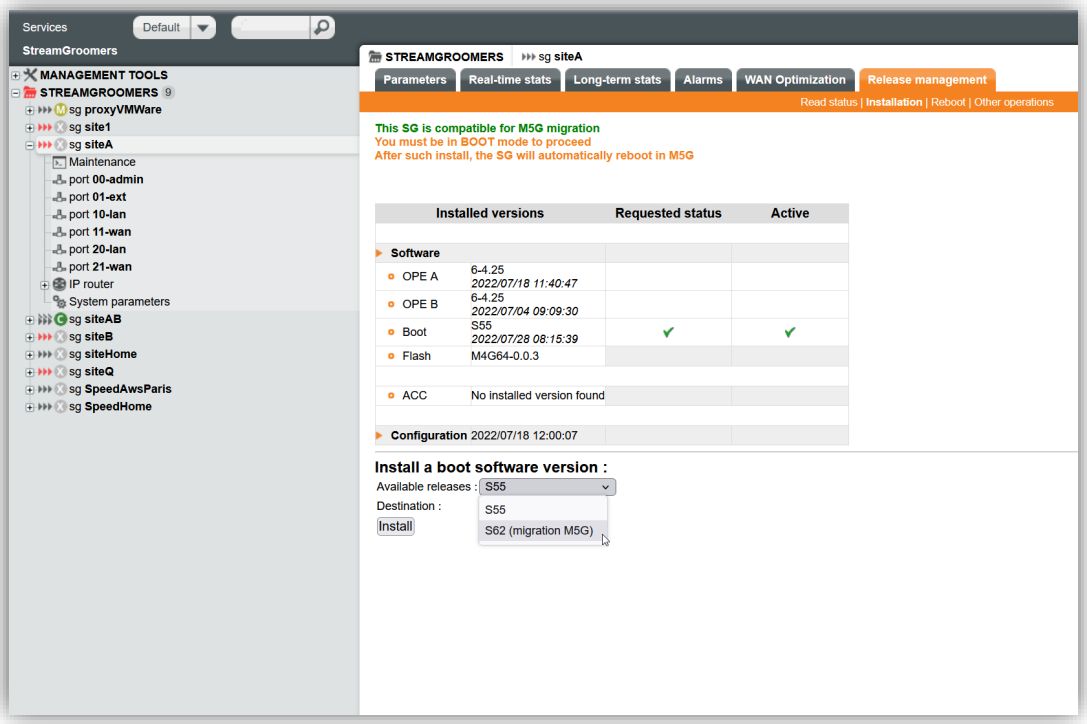


Click on "Version Management > Other Operations > Installation of a boot version":

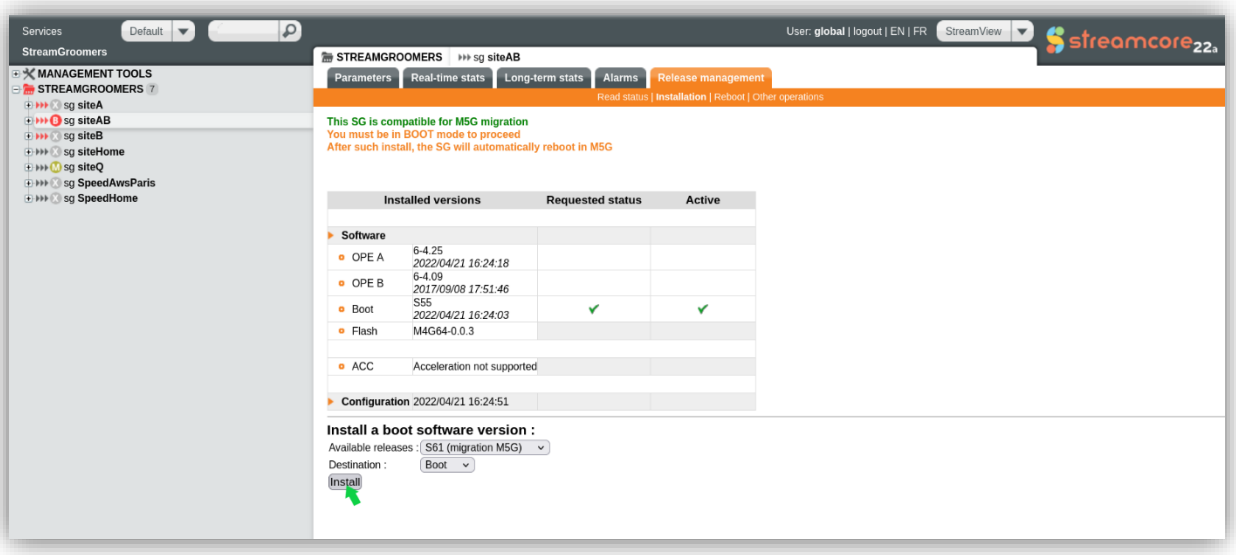


4.1.1.3.1 SG ELIGIBLE FOR M5G MIGRATION

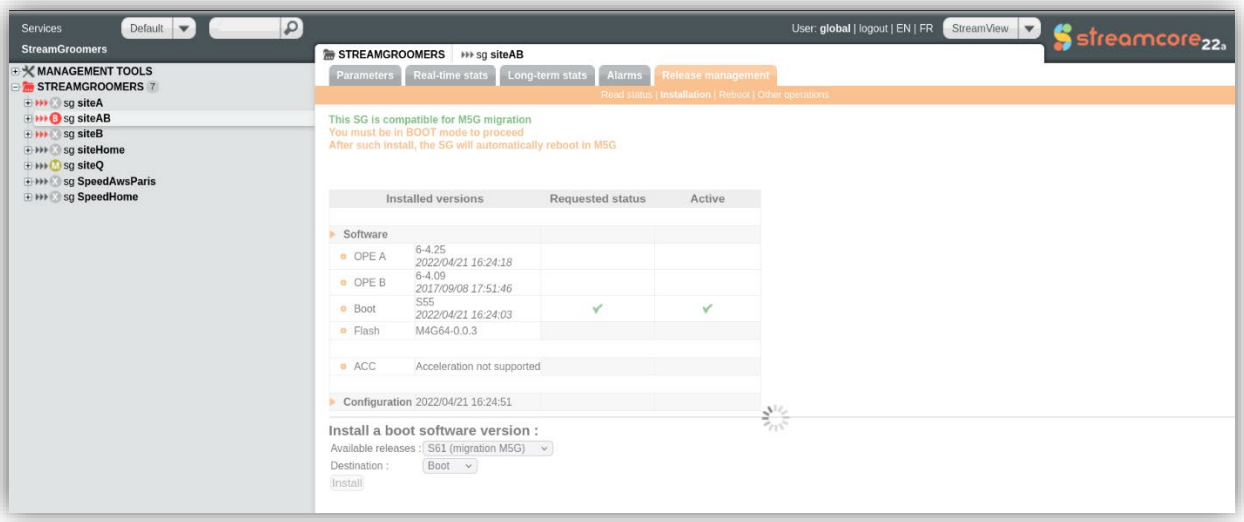
The system displays a message indicating the compatibility of the SG to the migration and will then propose the installation of the boot version **S62** especially dedicated to the M5G migration:



The launch of the installation will automatically trigger the migration of the SG :



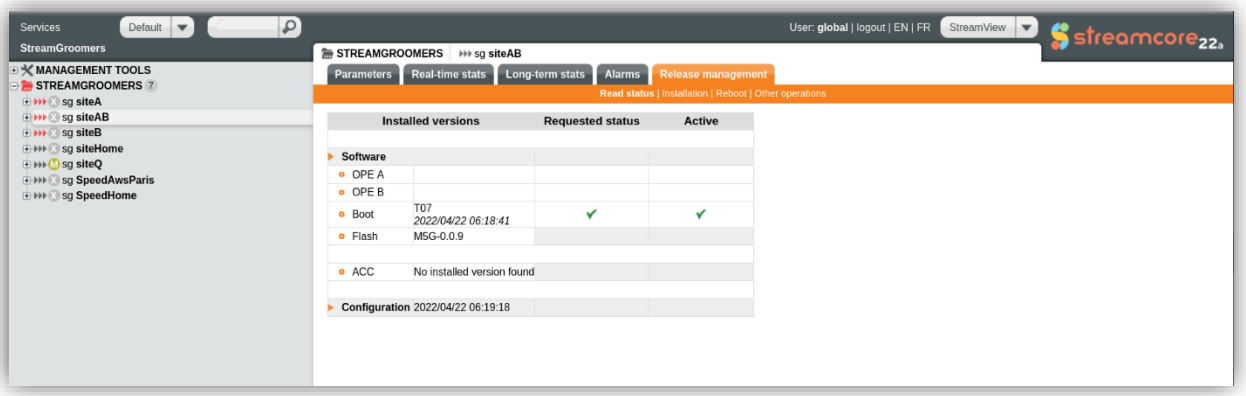
The migration is launched:



After a few minutes the SG is in boot T07, the migration is finished.

No OPE is installed. Before putting the probe in operational mode, it is recommended to update the Boot and to install a recent OPE:

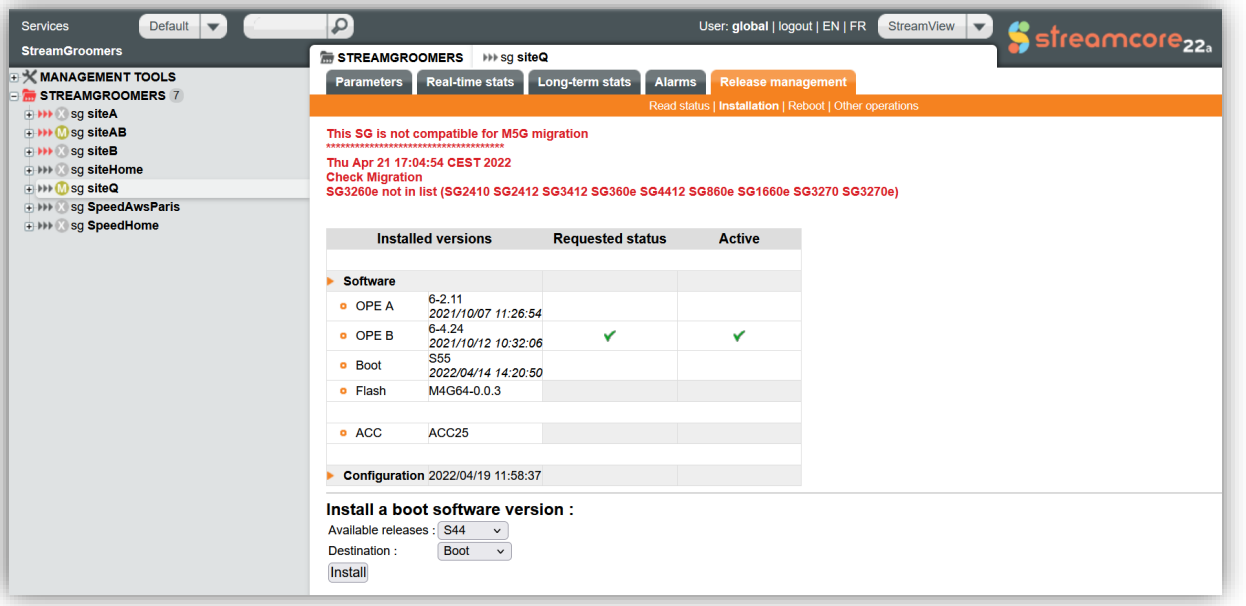
Before putting in OPE, check if you need to install newer versions of OPE and Boot.



The SG must then be put back into service in OPE mode. Caution: switching from Boot mode to OPE mode causes a disconnection of the ports and a micro outage of the service. This operation must be performed at a time that is not critical for network traffic.

4.1.1.3.2 SG NOT ELIGIBLE FOR MIGRATION

If the SG is not eligible for migration an information message about the impossibility of launching this migration is presented:



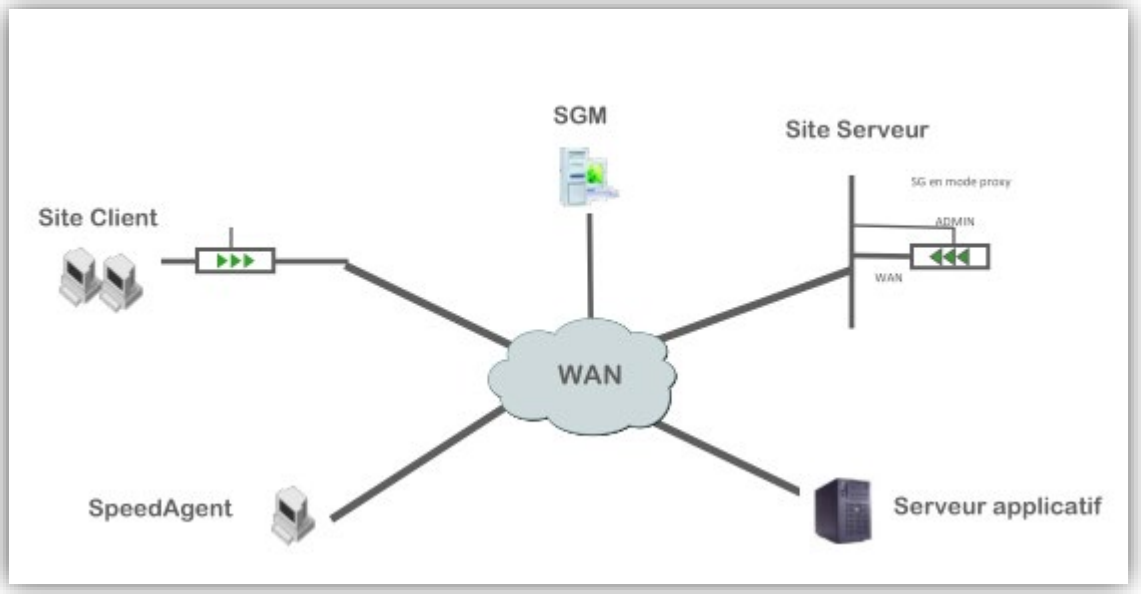
And the window will not offer bootS62 at installation.

4.1.2 SG acceleration in Proxy mode

Prerequisite: SG in OPE **6-5.12** and T09 boot. For the moment not available for SG in M4G version

For the use of acceleration features, the server-side SG can be deployed in proxy mode rather than in transparent mode (cutting over traffic).

In this case, the number of necessary ports is always 4 (Admin, Ext, Wan1, Lan1) but only 2 will have traffic in Proxy mode: the Admin port and the Wan1 port. The other ports needed to start the machine will not see any traffic.



The SG presents requests to the servers with its LAN/WAN address. It is no longer necessary to put the SG proxy in the break of a link to manage the accelerated flows. The SG proxy can also be deployed on virtual platforms:

- VMware
- AWS
- Azure,
- GCP
- KVM

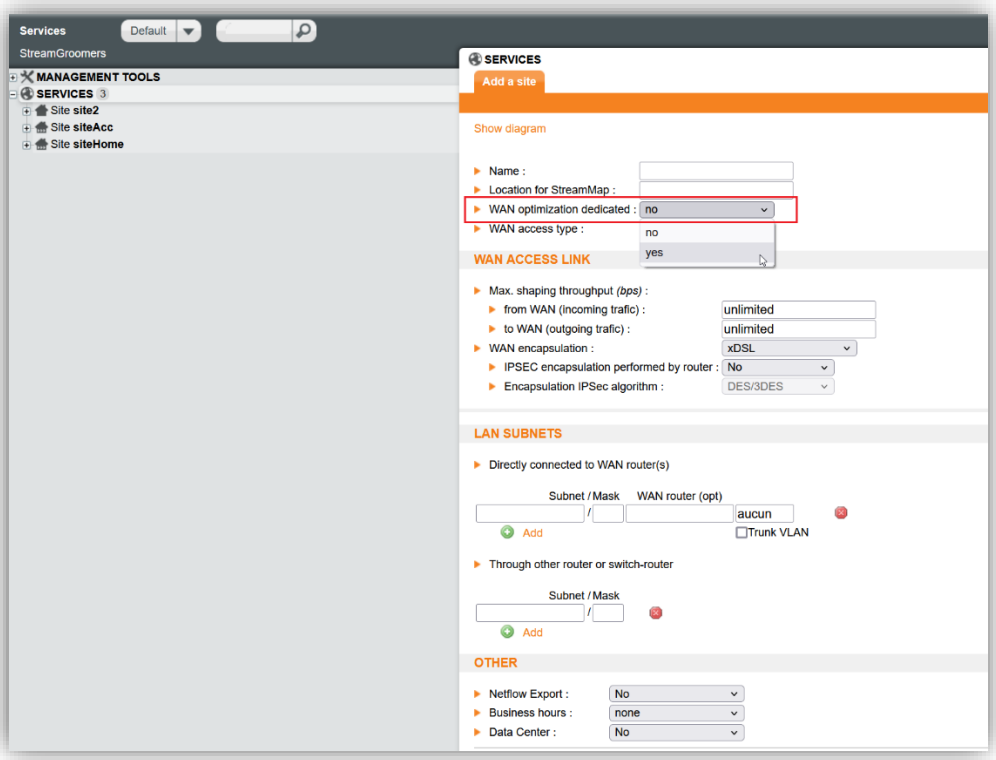
This SG allows for a physical or virtual acceleration relay integrated with Streamcore's monitoring functions and driven directly from the SGM. It simplifies deployments in virtual environments and also allows for the multiplication of physical probes to address larger acceleration loads.

4.1.2.1 CONFIGURATION

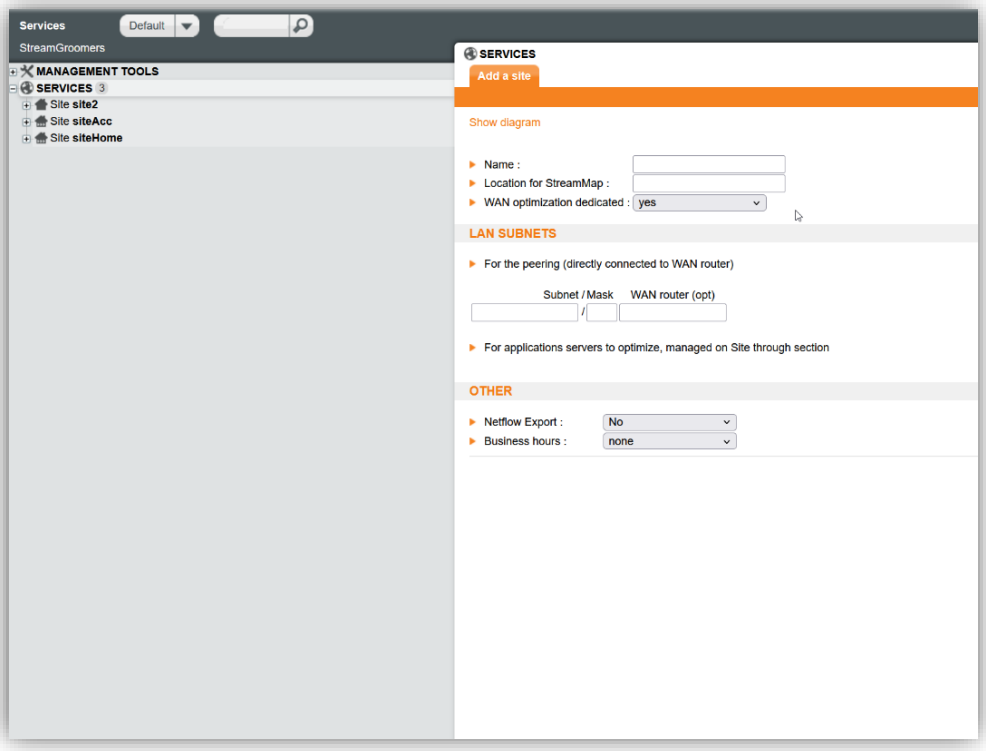
This Proxy mode is configured when the site is created by setting the "Dedicated Optimization" parameter to YES.

Note that once the site is created, it will no longer be possible to modify the value of this "Dedicated Optimization" parameter.

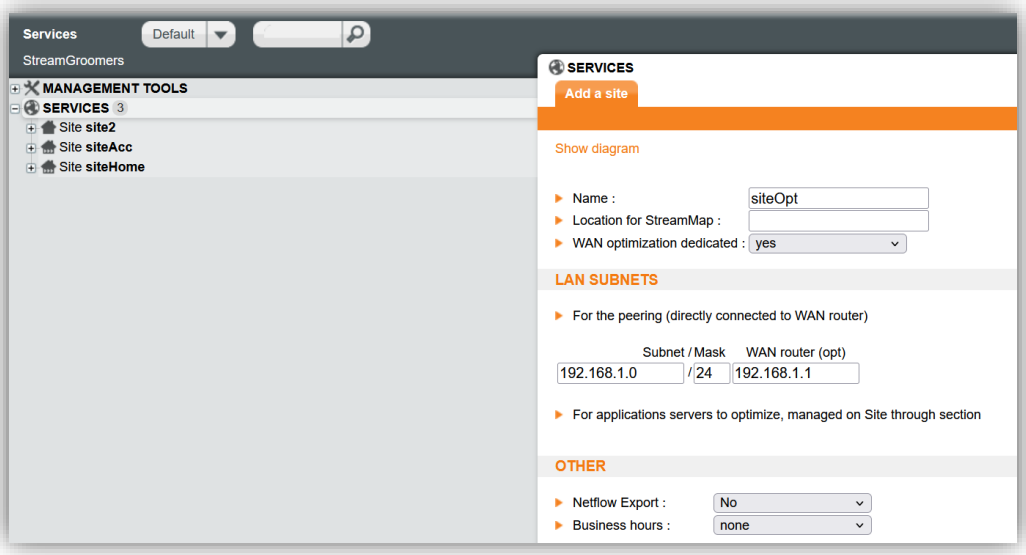
4.1.2.1.1 CREATION OF THE SITE



Setting this parameter to Yes will simplify the configuration page to show only the information useful for proxy mode: the LAN/WAN address map for acceleration

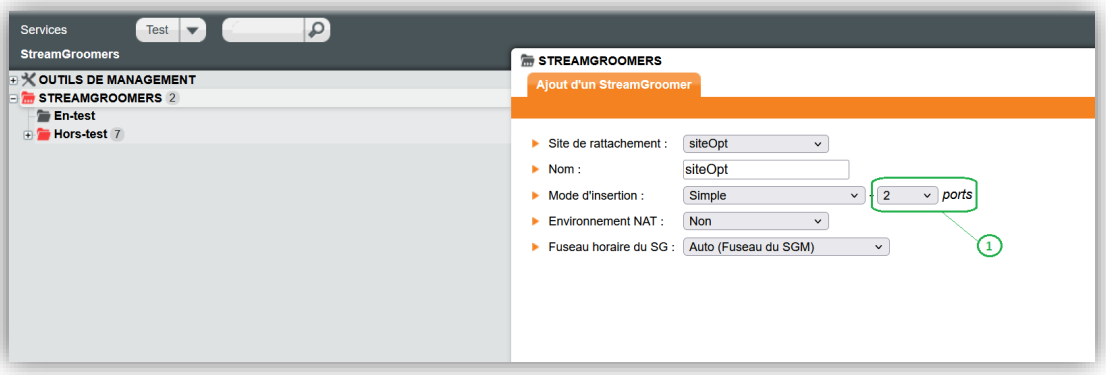


Fill in this parameter with the associated subnet:

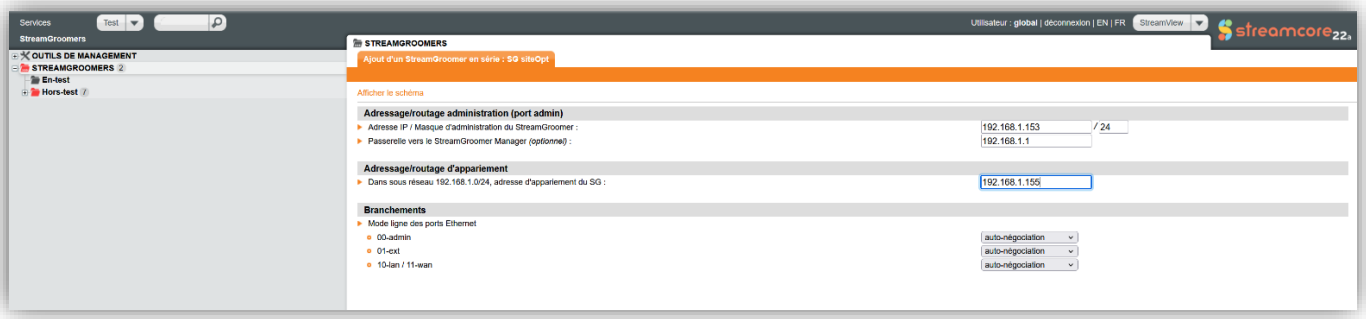


4.1.2.1.2 CREATION OF THE SG

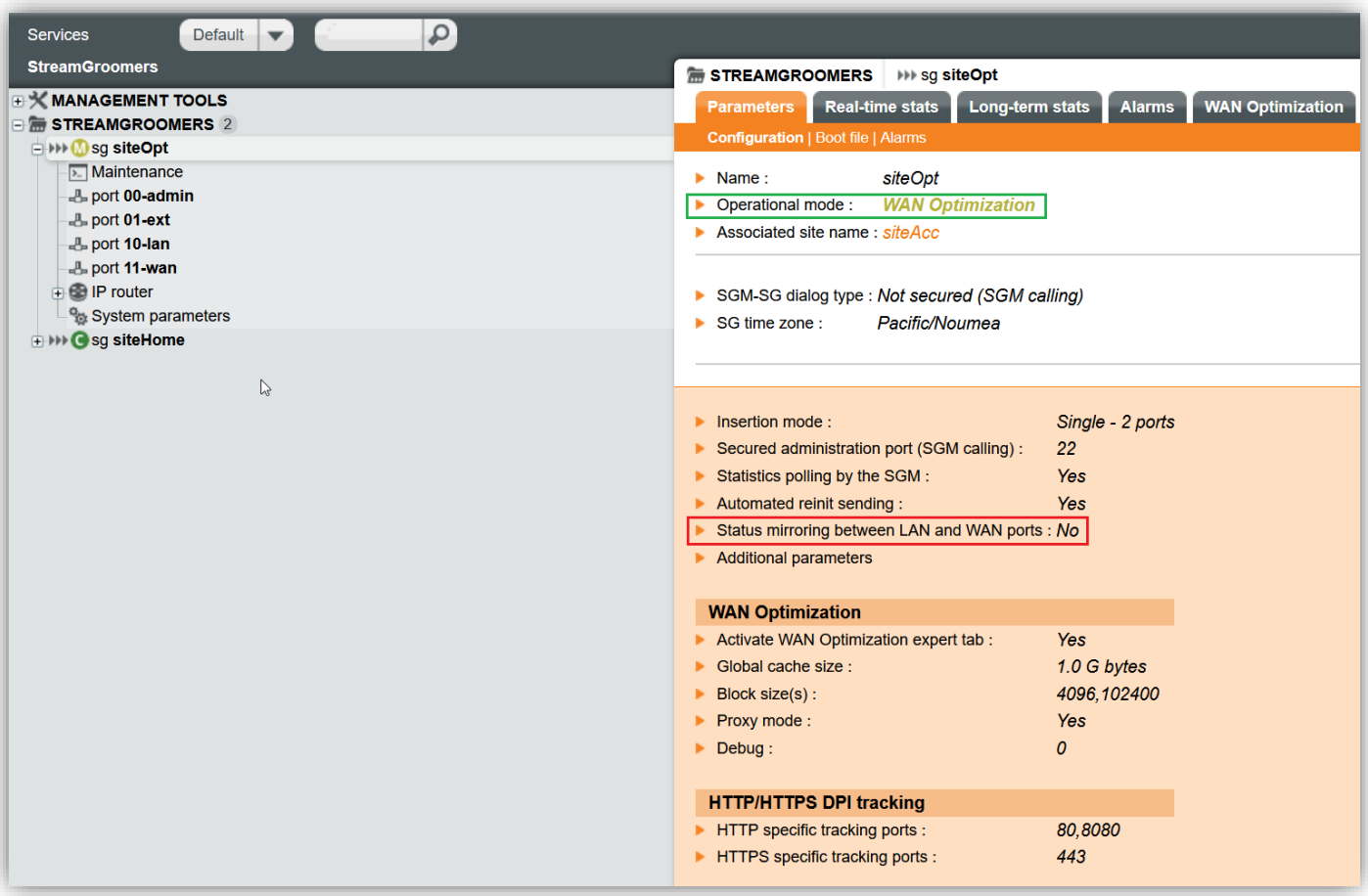
Then create the associated StreamGroomer :



1 in this Proxy mode, the only possible option for the SG is the configuration in 2-port mode. Then you have to fill in the administration address and the one used for acceleration:

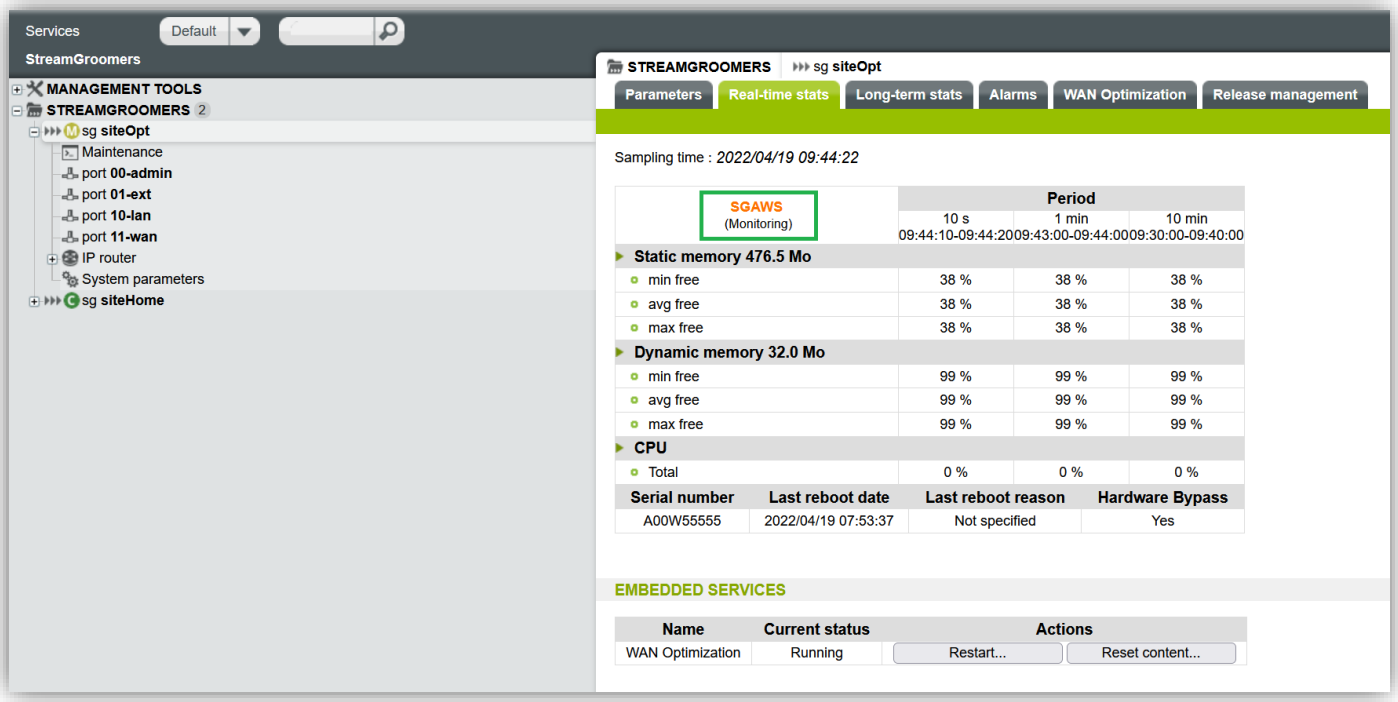


The added SG will be in **WAN Optimization** mode, the only one possible for a proxy SG:

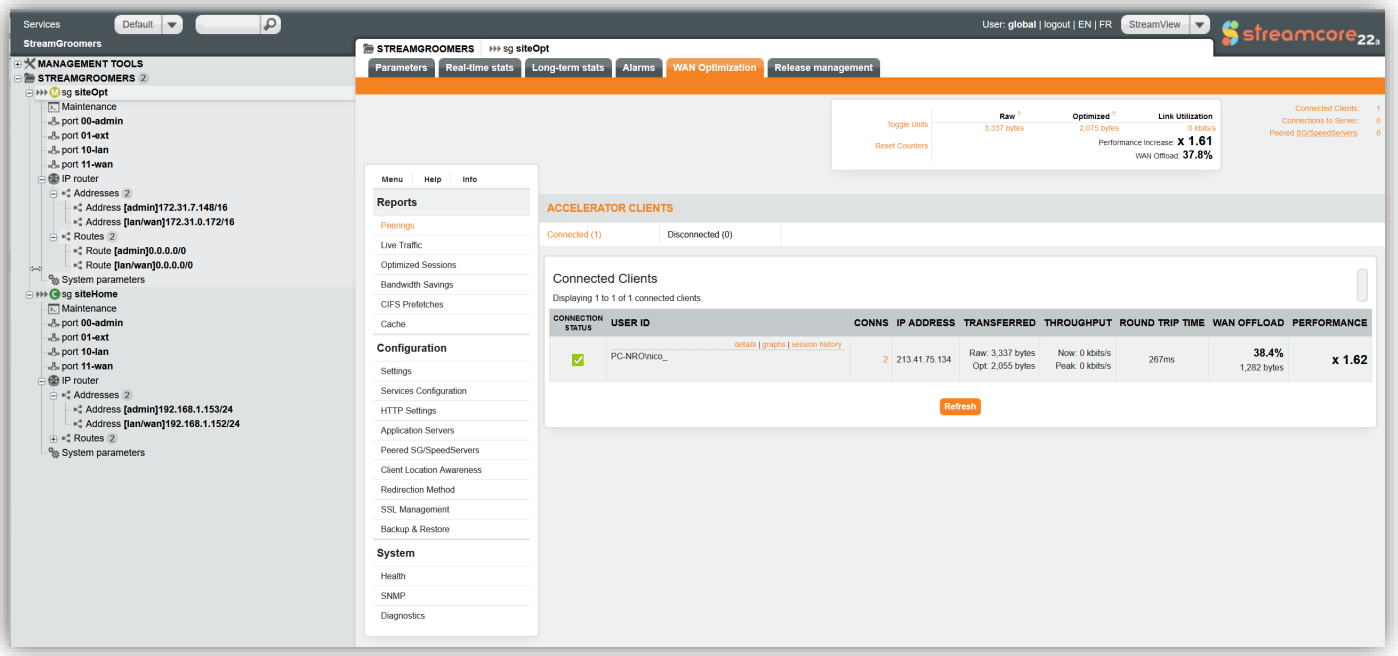


Note also, and because this SG will not use its LAN port, that the port status report is set to No for a proxy SG.

Once the SG has been put into service in OPE mode, it will be visible as a SG in **Monitoring mode**:



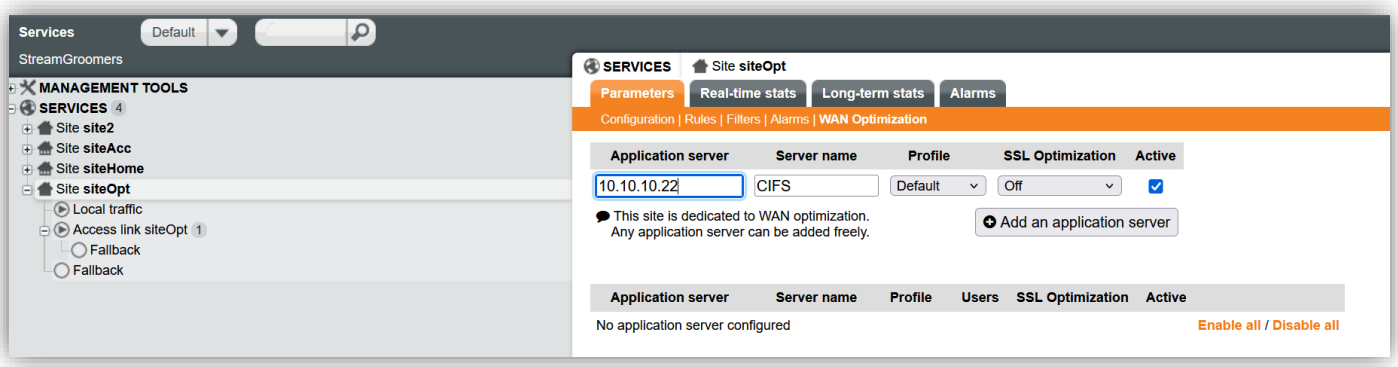
The SG is now ready to accept a SpeedAgent pairing:



4.1.2.1.3 ASSOCIATE SERVER ADDRESSES

On the site in the **Settings** tab **> WAN Optimization** enter the list of server addresses whose traffic is to be accelerated.

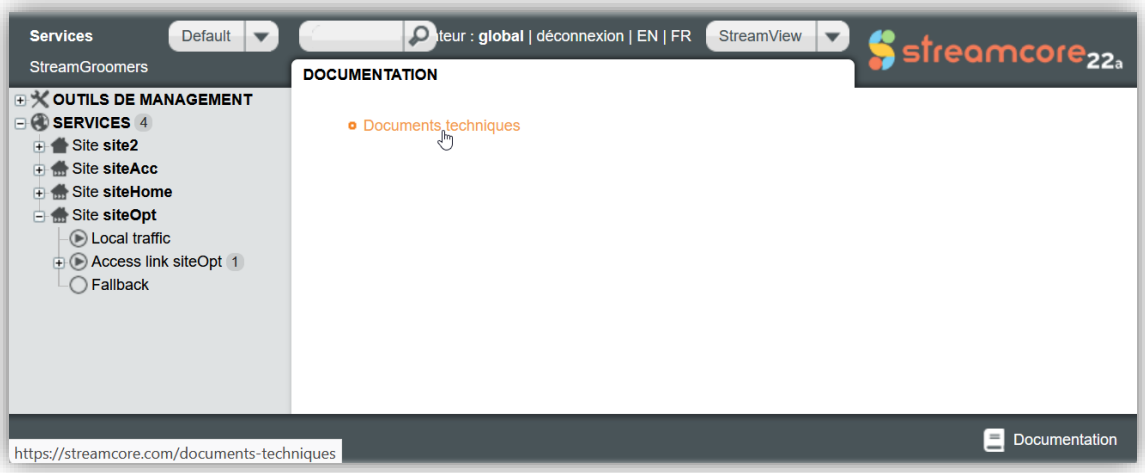
In the case of a site dedicated to acceleration (and therefore in proxy mode) there is no control over the address of the application servers. These addresses do not have to correspond to one of the site's subnets.



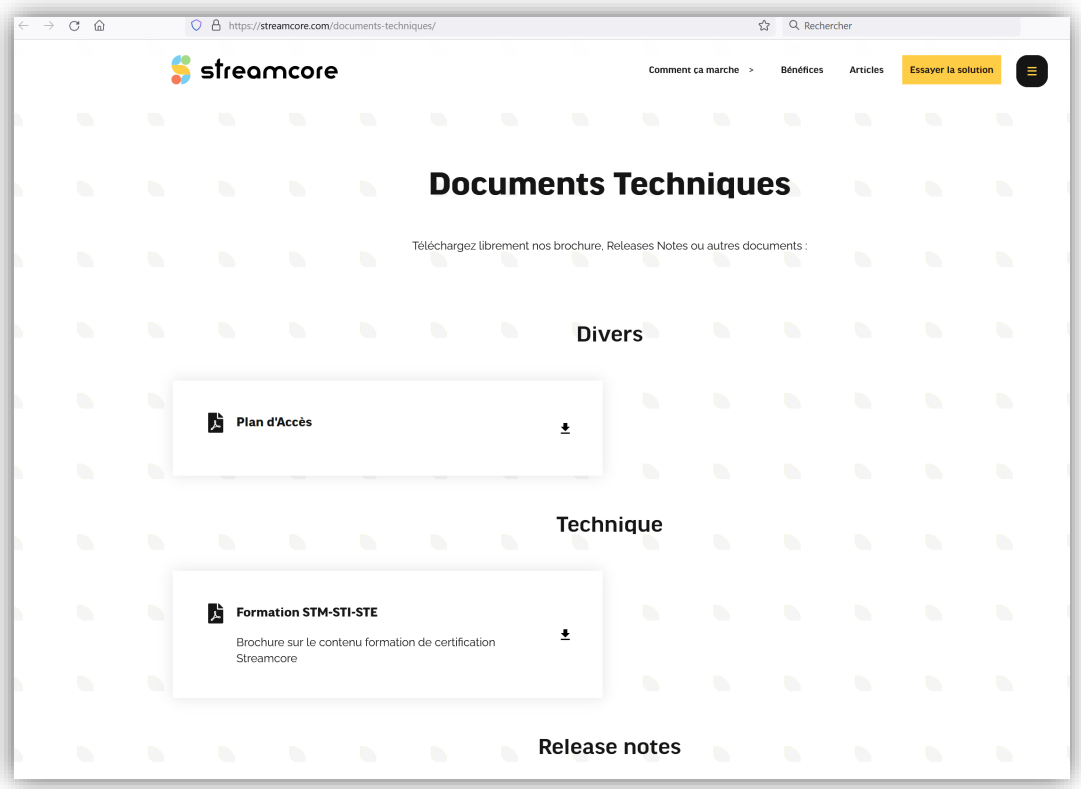
It is prudent to test the connectivity between the SG Proxy and the declared server to avoid any risk of traffic interruption due to a flow routing problem.

4.1.3 Documentation

Documentation is no longer embedded in the software suite. A link to the documentation hosted on the Steramcore website is provided. This ensures access to documentation that is always up to date and expanded as it becomes available.



To go directly to: https://streamcore.com/documents-techniques/

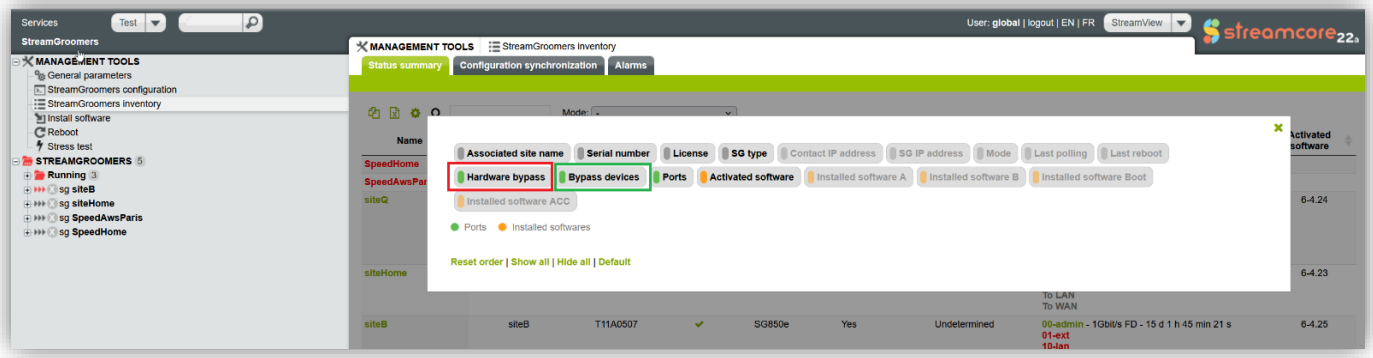


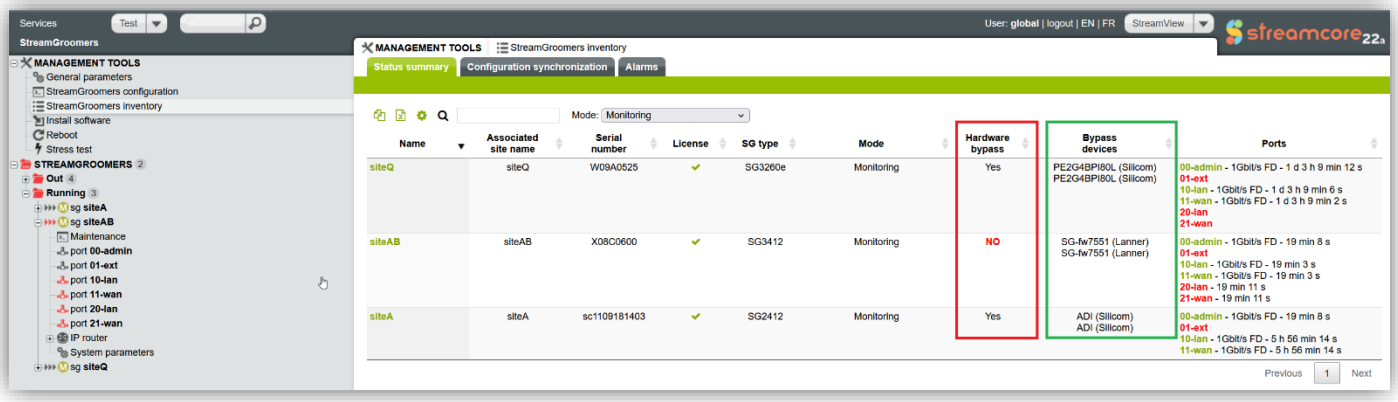
4.1.4 Presentation of bypass information in the inventory

Prerequisite: SG in BOOT version **S55** or **T09**

Two new data can be displayed in the SG inventory:

- Bypass configuration: open (No) or closed (Yes)
- Type of physical bypass cards





4.1.5 SGM base evolution

Debian 11 base for new virtual releases.

To maintain compatibility with Cloud providers' offerings, the virtual versions can now be delivered on a Debian 11 base. These versions also have new versions of PHP, PostgreSQL slightly more powerful.

The physical versions of SGM remain in Debian 9.

The software suites are delivered in both versions.

4.1.6 SGM virtual versions

SGM is now available on the following platforms. Deployment documentation is available to facilitate the installation and operation of these versions.

1.1.1.1 VMWare

1.1.1.2 HyperV

1.1.1.3 AWS

1.1.1.4 Azure

1.1.1.5 Google Cloud Platform (GCP)

1.1.1.6 KVM

1.1.1.7 Virtual SGMs require an internet connection to refresh their license, which is checked daily. In exchange, licenses are not tied to a hardware footprint and can be moved without limit between racks, sites and regions.

The documentation for these versions is available by following the link :

https://streamcore.com/documents-techniques/

4.2 FROM OPE 6-5.1 2

The M5G Base allows today to run several versions of OPE on compatible equipment (new platforms or M4G platforms migrated to M5G).

Streamcore PEOs can be classified into 4 categories:

- OPE kernel single core
- OPE in single core application mode
- OPE in application mode with parallelized QoS
- OPE in application mode with parallelized QOS and monitoring

1. OPE kernel single core

The single-core Kernel OPE mode available in M4G is no longer produced or available in M5G.

2. OPE in single core application mode

The OPE mode in single-core appliance mode is the current standard version in M5G.

It covers all the functions of the Streamcore solution (visibility, QoS, acceleration, load balancing) and offers a substantial performance improvement (x3 compared to an M4G probe)

3. OPE in application mode with parallelized QoS (QHP version)

The multicore version of QoS is also called QHP (Qos High Performance).

The QoS cores are separate from the monitoring core and are specialized by traffic direction.

This version offers x2 performance in QoS compared to the single-core version and covers the same functional spectrum.

This version is currently in beta test and can be obtained on request from Streamcore support. This version is intended to replace the single-core version which will disappear in the next versions.

4. OPE in application mode with parallelized QOS and monitoring (version 6-6)

This application mode version also parallelizes the monitoring functions on several cores in addition to the 2 specialized cores for QoS. This OPE is also referenced under the version number 6-6.

The improvement reaches x10 for some platforms compared to the single-core kernel version.

This version currently still has functional limitations:

- no dual,
- no tandem,
- no grooming, so no load balancing
- No acceleration

This version is suitable for use cases where monitoring or QoS at very high speeds (several gigabits per second or even several tens of gigabits per second) are required (datacenter monitoring, Internet access management)

This version is currently in beta test and can be obtained on request from Streamcore support.

Developments are underway to progressively lift the functional restrictions.

4.2.1 SG virtual versions

The SGs are now available virtually on the following platforms:

- VMware
- AWS
- Azure
- GCP
- KVM

These versions are intended to operate in monitoring mode only and traffic must be transmitted to them via a mirroring port.

4.2.2 SG Proxy

In order for the SG to operate in proxy mode for acceleration, see paragraph 4.1.2it must at least be in OPE 6-5.12

4.3 SG: BOOT S5 5

4.3.1 Read bypass information from the inventory

To upload the bypass configuration information, see paragraph 4.1.4The SG must be in a version of Boot S55 (or higher).

4.4 SG: BOOT S62

4.4.1 Migration from SG M4G to SG M5G

Install this version on a SG to automatically migrate it, at installation, to the M5G version (boot T07).

4.5 SG : BOOT T09

4.5.1 Bypass management

It is possible to control the management of each bypass of a SG for certain types of cards.

The bypass can be configured in **closed mode** (in case of failure, the SG closes its bypass and behaves as a wire ensuring the continuity of the service in case of power failure, loop (triggering of the watchdog) or during boot phases or when the SG is in OPE bypass or BOOT mode). This is the default configuration mode.

The bypass can also be configured in **open** mode to trigger the opening of the bypass during the previous phases. In this case the traffic is cut off in case of power failure, loop (watchdog triggering) or during boot phases or when the SG is in OPE bypass mode or BOOT mode

4.5.1.1 CONFIGURATION

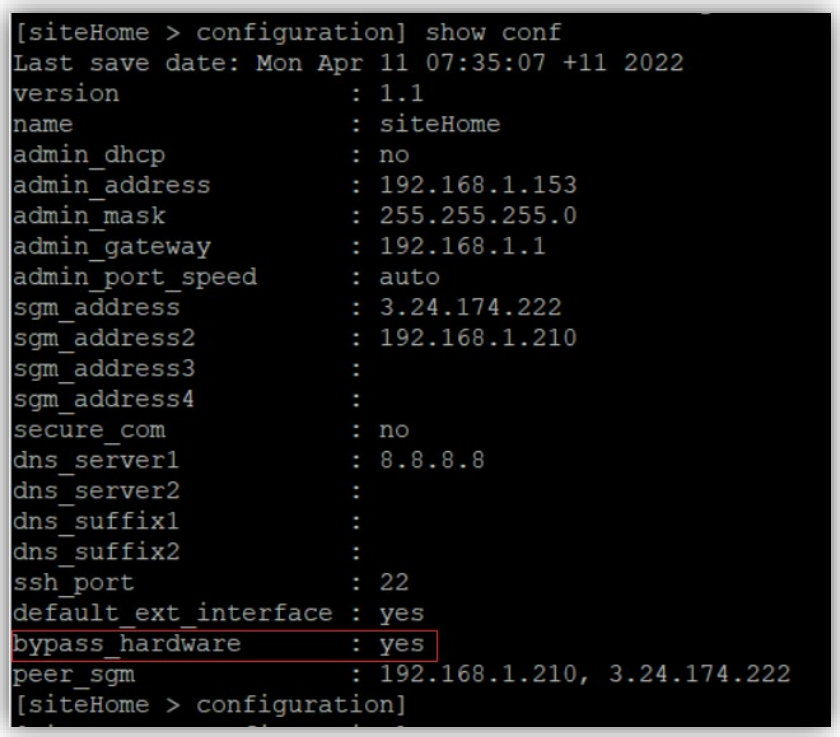
WARNING: Changing this parameter to No will directly cut the traffic between the LAN and WAN ports of the SG (bypass open in Boot mode). Change the value of the parameter in good accessibility conditions (console or ADMIN port not crossing the SG).

This configuration parameter can only be modified directly on the SG in the login boot configuration menu.

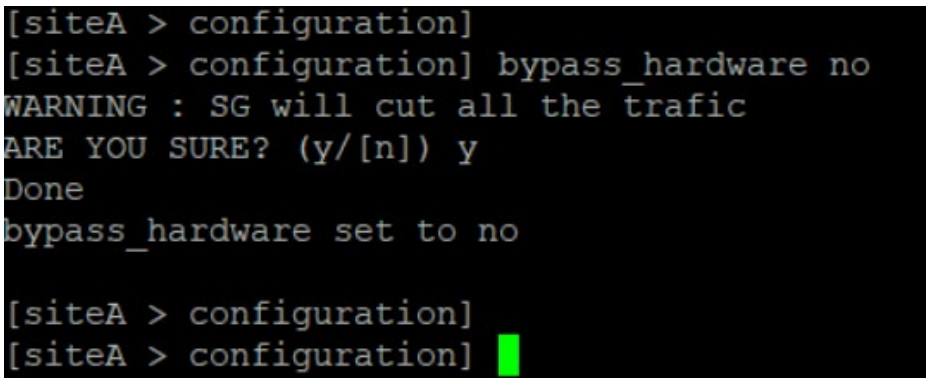
In configuration it is the *bypass_hardware* parameter which can take two values:

Yes: Bypass closed

No: Bypass open



To change the value of the bypass_hardware parameter:



A confirmation is requested and the change is directly applied, no need to apply the change with the "apply" command.

The value of this parameter can only be changed (to "no") if the SG is in BOOT world (not in OPE mode):

```
[siteHome > configuration] bypass_hardware no
SG must be in boot mode
[siteHome > configuration]
```

Not all types of bypass cards can be configured at this time. A message will appear if the current card type is not supported and the operation will be aborted:

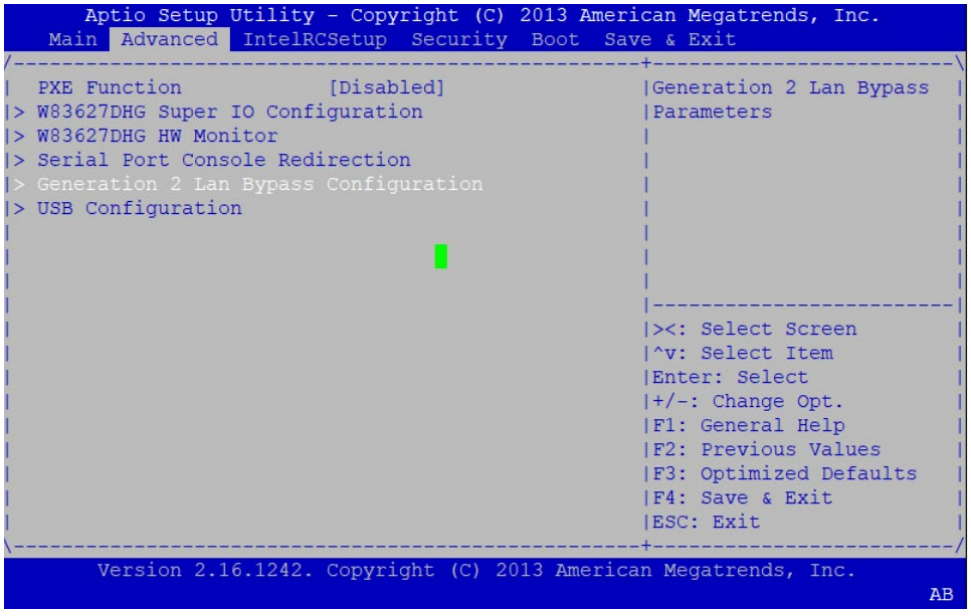
```
[siteHome > configuration] bypass_hardware no
Netfork cards not compatible
[siteHome > configuration]
```

4.5.1.2 SPECIAL CASE SG3412

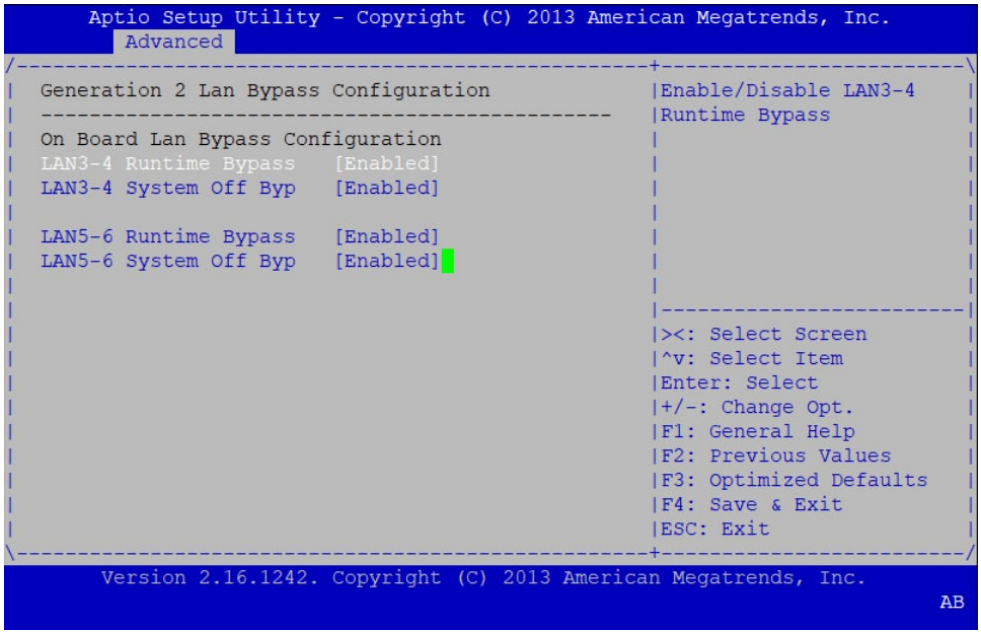
SG3412 type SGs have a special configuration mode for this bypass parameter.

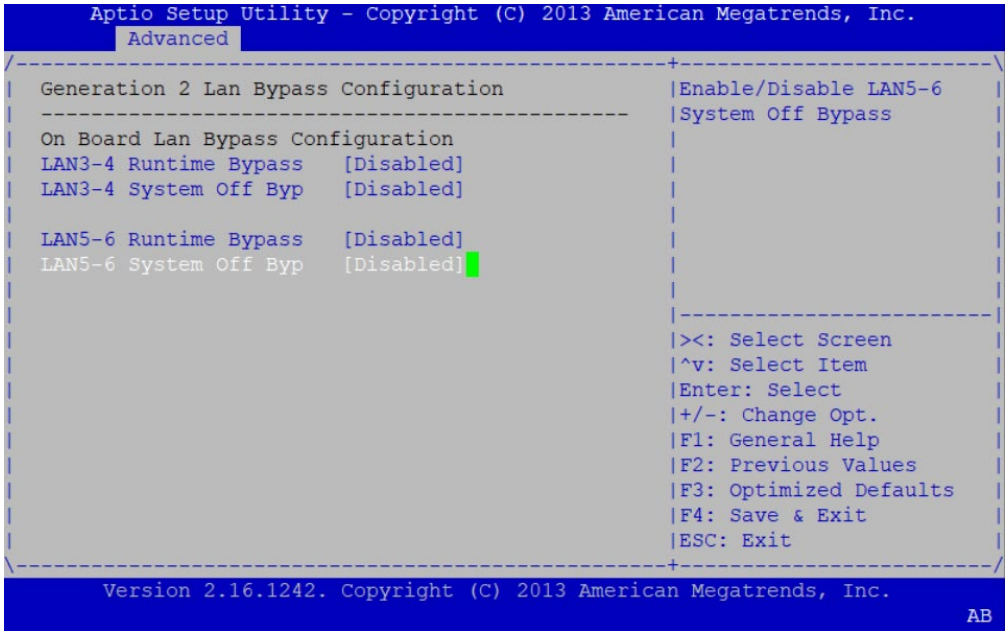
You have to enter the BIOS of the machine to change the value of the parameter (which is always Yes, bypass closed, by default).

To enter the BIOS of the SG, at startup, press Esc or Delete and go to "Advanced":

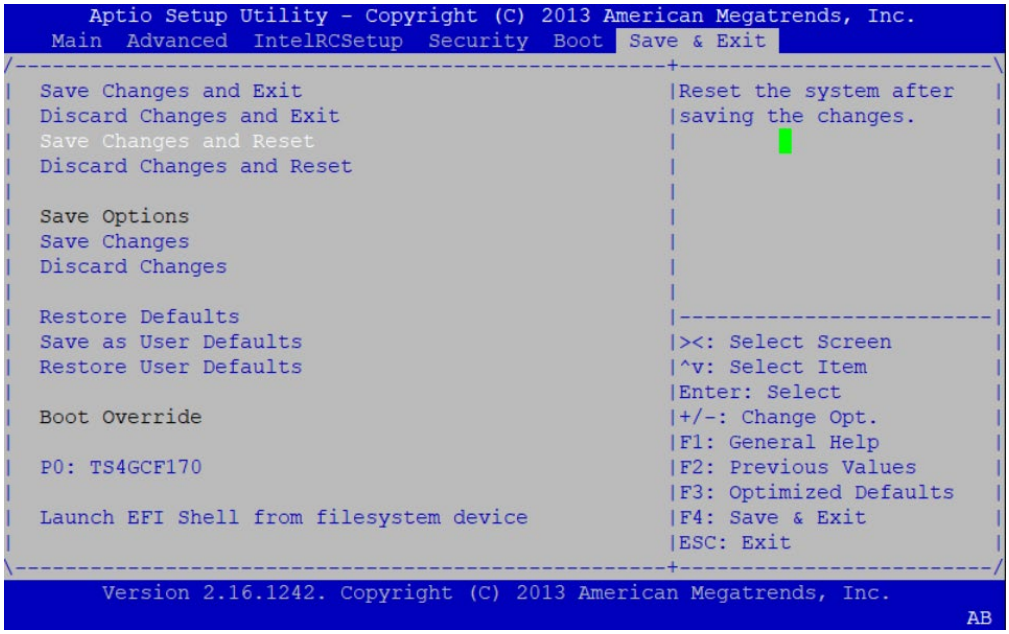


Change the 4 Enabled values to Disabled:

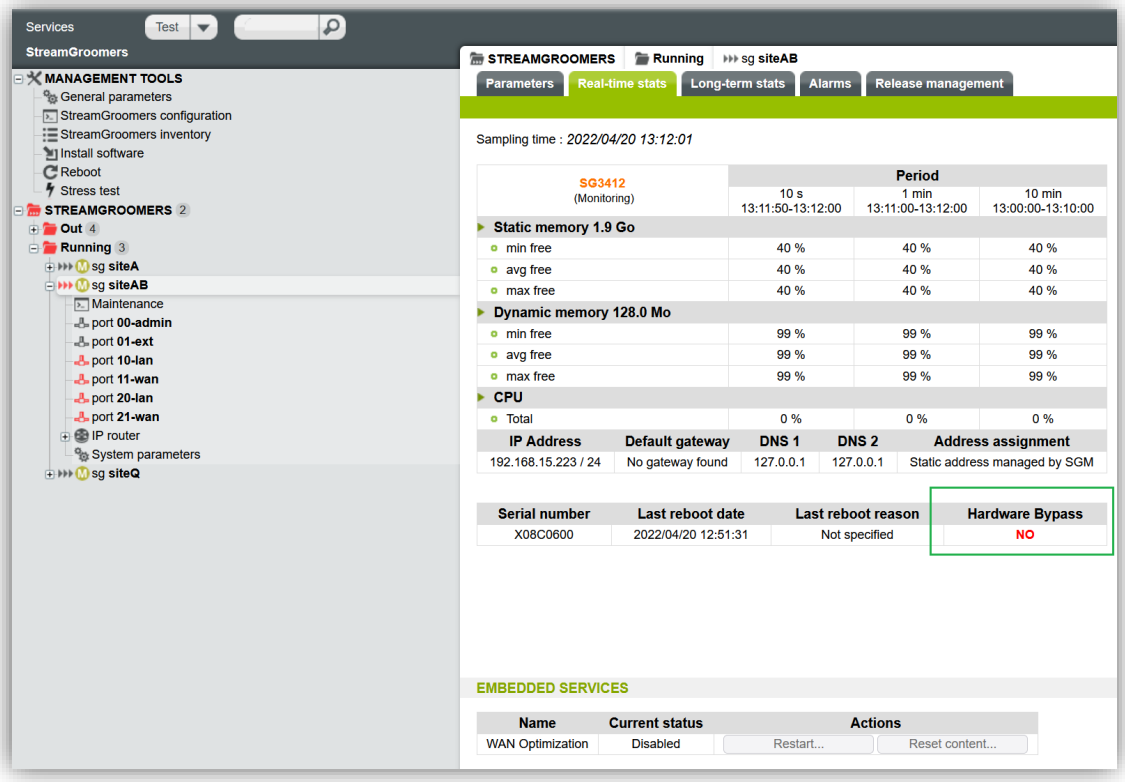




Save the new configuration :



The SG is now with a Bypass at No:



4.5.2 SG Proxy

For the SG to work in proxy mode for acceleration, cf. 4.1.2The SG must be in T09 boot version (or higher).

4.5.3 Read bypass information from the inventory

To get information about the bypass status, see paragraph 4.1.4The SG must be in a version of Boot T09 (or higher).

4.6 CLOUD IMAGES

4.7 ACC 2 6

The ACC26 acceleration module is available for the SG M4G and M5G.

For the SG M5G it is however recommended to switch to the ACC30 version.

4.8 ACC 30

The ACC30 acceleration module is only available for the M5G SGs and will not be offered or installed on the M4G SG. The latter SG will have to stay on the ACC26 version of the acceleration.

5 Problems corrected by Software Suite 22a

All components of the software suite are delivered as updated versions.

Note: In this software suite, the BOOT components are **S55**. and **T09**. The correct version, depending on the type of SG (M4G or M5G), will be installed automatically by the SGM when a BOOT is deployed on the StreamGroomers.

The following tables list the issues that have been fixed in version 22a of the software suite and the new features if they are reported as [implemented]:

Customer Ticket	Reference	Description of the problem that was solved (SGM 22a)
SGM 22a		
	SC-638	[SGMConf] : do not embed M3G and M3Ge OPEs anymore
	SC-640	Migration SG M4G to M5G
	SC-643	[SGMConf] : sorting of the packages presentation
SCC-00001376	SC-653	[License]: Impossible to change the proxy configuration for the license as long as it is activated

Customer Ticket	Reference	Description of the problem that was solved (SGM 22a.1)
SGM 22a.1		
SCC-00001394	SC-1035	[Migration SG M4G to M5G]: Unable to migrate a SSH managed SG M4G

Customer Ticket	Reference	Description of the problem that was solved (OPE 6-5.13)
OPE 6-5.13		
SCC-00001386	SC-950	Dual behavior problem on DUAL2 traffic

Customer Ticket	Reference	Description of the problem that was solved (OPE 6-5.14)
OPE 6-5.14		
SCC-00001393	SC-1023	Port status report of a non-functional SG-M5G
	SC-1027	QOS block on invalid frame or without output route Regression on 6-5.11

Customer Ticket	Reference	Description of the problem that was solved (Boot T09)
Boot T09		
SCC-00001374	SC-365	SG M5G boot menu : config admin_port_speed 100M-fd (all except auto) KO

6 Known problems

The table below lists known problems and provides a workaround if necessary.

Reference	Component	Description of the known problem	Alternative solution
FB46694	StreamView StreamAccess	From software suite 6-4.S08 - Authentication with Radius does not work if the password contains the following characters • Double quotation mark " • quotation mark ' • Slash / • Exclamation mark! • Back cut • Hooks [and] • Star *	Change the Radius password avoiding the use of these characters.
FB42810	SG	StreamGroomers can restart in a port mirroring configuration when capturing traffic.	
-	SG	Grooming, dual mode and tandem mode do not work in high performance mode 6-2.11	Do not activate the high performance mode.
FB44508	SGM	StreamView - There are no real-time statistics on the audio/video terminal rule when RTP+MOS measurements are selected.	
-	SG	In the WAN optimization profile definition, the FTP manager does not work. Only the control session is optimized.	FTP data traffic can only be accelerated by the Fallback handler.
-	SGM	StreamView - If we declare a server with a certificate while the corresponding SG is inaccessible, the application server will not be considered for acceleration.	Solution: re-insert the certificate and restart the SG.
FB47230	SG	With ACC24 or later and an older OPE (< 6-4.17), each reboot of the SG will clear the acceleration cache.	Upgrade to OPE 6-4.17 or higher

Reference	Component	Description of the known problem	Alternative solution
FB49373	SG	The SG may not be accessible from the SGM if there is a DNS misconfiguration on that SG.	Update the DNS configuration of the SG
FB49383	SGM	Possible migration problem to version 22a if the SGM contains more than one database, including a very large one.	Contact Streamcore support to manually start the migration on this very large base.
FB49409	SG	On an SG in Dual/Tandem mode and in an SGM HA environment (SGM cluster), changing the communication mode from "calling SG" to "not secured" may cause an error.	Contact Streamcore Support
FB4913	SG	The SG with a T0# boot version could not use any SGM calling the Secure dialog type (weak or strong)	Choose the one that **is not secure** and that already uses an SSH connection. Or a type of SG caller dialog.

7 Installation and deployment

Read the following recommendations carefully:

- CAUTION: On the SG250e, status mirroring between LAN and WAN ports does not work.
- After starting the StreamGroomers in operational software, it is strongly recommended to check the LAN and WAN ports statistics (speed and duplex mode, CRC errors, collisions...) in order to avoid any configuration mismatch with the interconnected equipments.
- We recommend to connect to the ADMIN port on the LAN side of the StreamGroomer.
- On the SG350e, when switching from boot software (closed bypass) to operational software in bypass mode, the bypass opens and closes immediately, resulting in two interface state changes. This operation can block traffic for a few seconds.
- Direct connection of peripherals (mouse, keyboard and monitor) to the SGM should only be done for maintenance purposes.

8 Software interoperability rules

8.1 OPERATION VERSION DROP

Read the rules carefully:

- SGM: unauthorized operation (risk of data loss)
- SG OPE: operation authorized if the OPE vs Boot/System interoperability rules are respected (see table below).
- SG Boot/System: unauthorized operation (risk of material damage)
- ACC acceleration system: unauthorized operation

8.2 INTEROPERABILITY BETWEEN COMPONENTS

Interoperability is guaranteed for an SGM in the following cases:

- Version SGSS 6.4 with a SG in OPE 6.5, 6.4, 6.3 and 6.2
- Version SGSS 6.5 with a SG in OPE 6.5, 6.4, 6.3 and 6.2
- SGSS 22x version with a SG in OPE 6.5, 6.4 and 6.2-11

Interoperability not guaranteed for an SGM that is older than the OPE version.

The table below indicates when compatibility between SGM and SCO versions is guaranteed:

SCO	SGSS 6.4	SGSS 6.5
Up to 1.2	Not guaranteed	Not guaranteed
Up to 1.3	Yes, for OPE >= 6-2	Yes, for OPE >= 6-2
From 6.5	Yes, for OPE >= 6-2	Yes, for OPE >= 6-2

9 Technical support

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